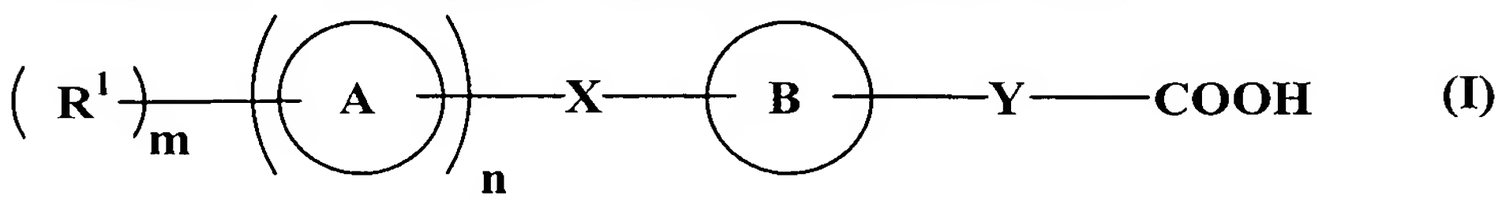
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A compound represented by formula (I):



wherein ring A represents a cyclic group;

ring B represents a cyclic group which may further have a substituent(s);

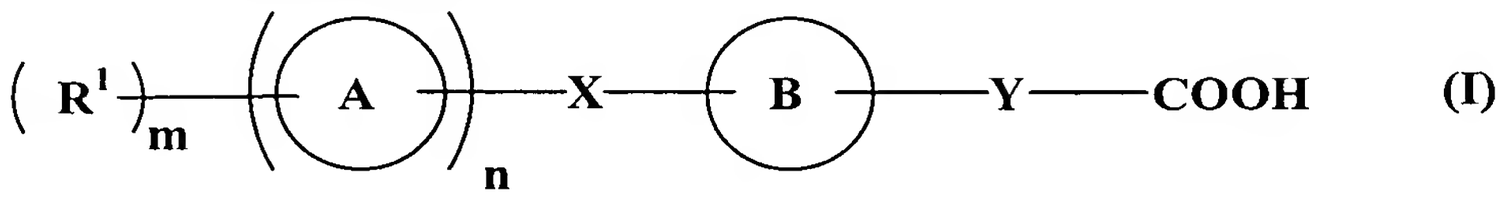
X represents a bond or a spacer having 1 to 8 atoms in its main chain in which one atom in the spacer may be taken together with a substituent on ring B to form a ring group which may have a substituent(s);

Y represents a bond or a spacer having 1 to 10 atoms in its main chain in which one atom in the spacer may be taken together with a substituent on ring B to form a ring group which may have a substituent(s);

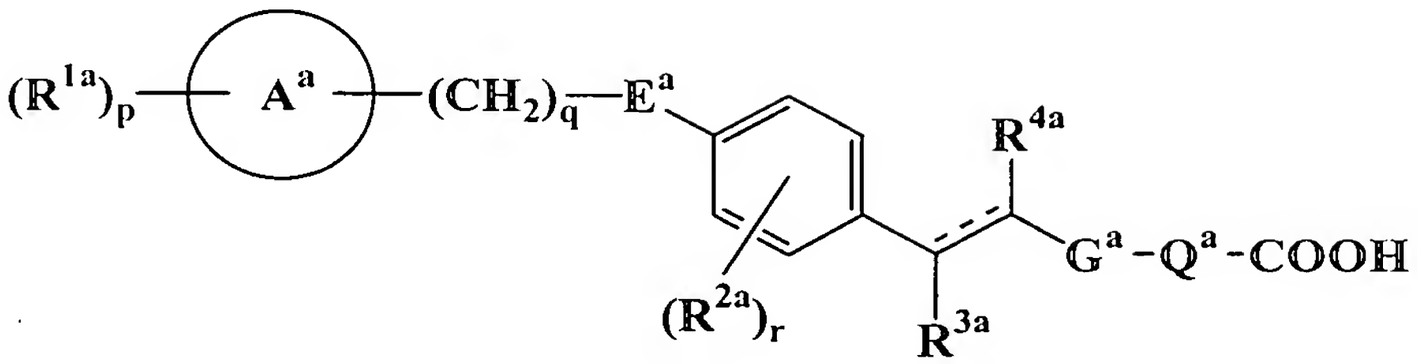
n represents 0 or 1, wherein when n is 0, m is 1 and R^1 represents a hydrogen atom or a substituent, and when n is 1, m is 0 or an integer of 1 to 7 and R^1 represents a substituent in which when m is 2 or more, plural R^1s are the same or different,

a salt thereof, a solvate thereof or a prodrug thereof.

2. (original): The compound according to claim 1, which is a compound represented by formula (I):



wherein all symbols have the same meanings as in claim 1, and wherein a compound represented by formula (Ia) is excluded:



(Ia)

wherein R^{1a} represents C1-8 alkyl, C1-8 alkoxy, a halogen atom, nitro or trifluoromethyl;

ring A^a represents a C5-7 monocyclic carbocyclic group or a 5- to 7-membered monocyclic heterocyclic group containing one or two nitrogen atoms, one oxygen atom and/or one sulfur atom;

E^a represents $-CH_2-$, -O-, -S- or $-NR^{6a}-$, in which R^{6a} represents a hydrogen atom or C1-8 alkyl;

R^{2a} represents C1-8 alkyl, C1-8 alkoxy, a halogen atom, nitro or trifluoromethyl;

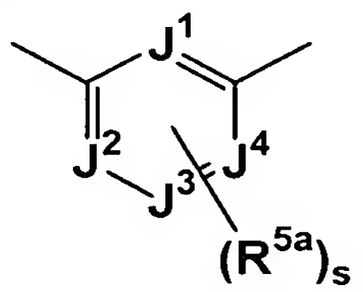
R^{3a} represents a hydrogen atom or C1-8 alkyl;

R^{4a} represents a hydrogen atom or C1-8 alkyl, or

R^{2a} and R^{4a} may be taken together to form $-CH_2CH_2-$ or -CH=CH-;

G^a represents $-CONR^{7a}-$, $-NR^{7a}CO-$, $-SO_2NR^{7a}-$, $-NR^{7a}SO_2-$, $-CH_2NR^{7a}-$ or $-NR^{7a}CH_2-$, in which R^{7a} represents a hydrogen atom, C1-8 alkyl; Cyc1 or C1-8 alkyl substituted with Cyc1, and Cyc1 represents a C5-7 monocyclic carbocyclic group or a 5- to 7-membered monocyclic heterocyclic group containing one or two nitrogen atoms, one oxygen atom and/or one sulfur atom;

Q^a represents C1-4 alkylene or

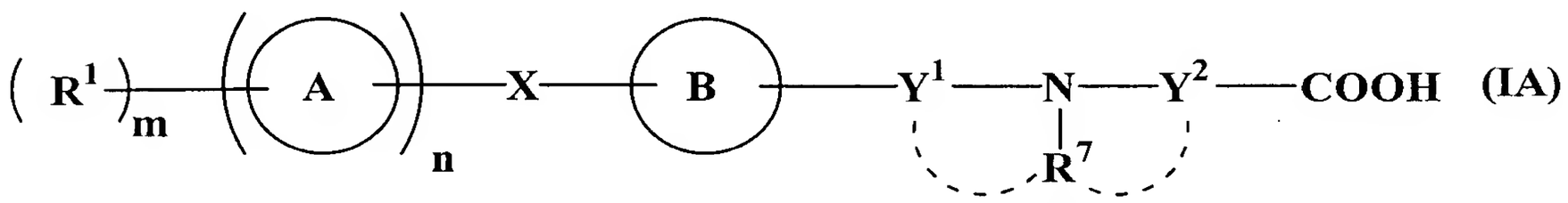


wherein J^1, J^2, J^3 and J^4 each independently represents a carbon atom or a nitrogen atom in which the number of the nitrogen atom(s) is 2 or less; R^{5a} represents (1) C1-8 alkyl, (2) a halogen atom, (3) nitro, (4) cyano, (5) trifluoromethyl, (6) trifluoromethoxy, (7) phenyl, (8) tetrazolyl, (9) $-OR^{9a}$, (10) $-SR^{10a}$, (11) $-COOR^{11a}$, (12) $-NR^{12a}R^{13a}$, (13) $-CONR^{14a}R^{15a}$, (14) $-SO_2NR^{16a}R^{17a}$, (15) $-NR^{18a}COR^{19a}$, (16) $-NR^{20a}SO_2R^{21a}$, (17) $-SO_2R^{22a}$, or (18) $-OP(O)(OR^{23a})_2$, in which R^{9a} to R^{18a}, R^{20a} and R^{23a} each independently represents a hydrogen atom, C1-8 alkyl, Cyc2 or C1-8 alkyl substituted with Cyc2, or R^{12a} and R^{13a}, R^{14a} and R^{15a}, or R^{16a} and R^{17a} may

be taken together with a nitrogen atom to which they are bound, to form a 5- to 7-membered monocyclic heterocyclic group containing one or two nitrogen atoms, one oxygen atom and/or one sulfur atom, in which the heterocyclic group may be substituted with C1-8 alkyl, hydroxy or amino; R^{19a} and R^{21a} each independently represents C1-8 alkyl, Cyc2 or C1-8 alkyl substituted with Cyc2; R^{22a} represents hydroxy, C1-8 alkyl, Cyc2 or C1-8 alkyl substituted with Cyc2; and Cyc2 represents a C5-7 monocyclic carbocyclic group or a 5- to 7-membered monocyclic heterocyclic group containing one or two nitrogen atoms, one oxygen atom and/or one sulfur atom;

p represents 0 or an integer of 1 to 5;
q represents an integer of 4 to 6;
r represents 0 or an integer of 1 to 4;
s represents 0 or an integer of 1 to 4; and
---- represents a single bond or a double bond.

3. (original): The compound according to claim 2, which is represented by formula (IA):



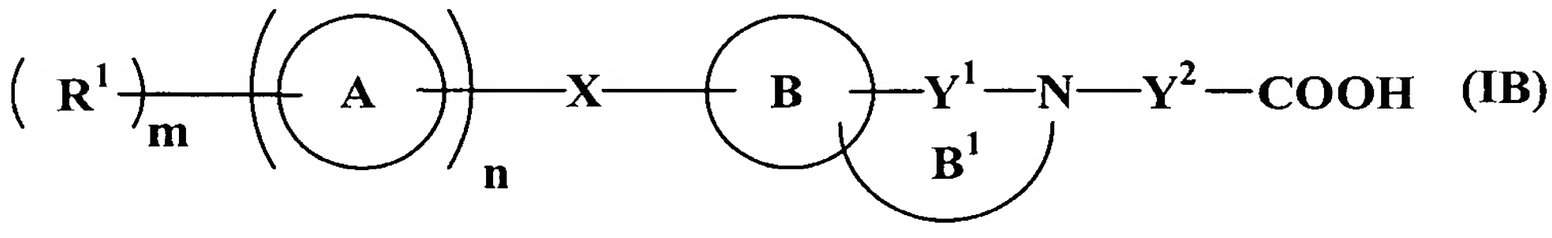
(IA)

wherein Y^1 and Y^2 each independently represents a bond or a spacer having 1 to 9 atoms in its main chain in which the total atom number of the main chains of Y^1 and Y^2 is 9 or less;

R^7 represents a hydrogen atom or a substituent, or may be taken together with one atom in the spacer represented by Y^1 and/or Y^2 to form a nitrogen-containing heterocyclic group which may have a substituent(s); and

other symbols have the same meanings as described in claim 1.

4. (original): The compound according to claim 2, which is represented by formula (IB):



(IB)

wherein ring B^1 represents a nitrogen-containing heterocyclic group which may have a substituent(s) in which a nitrogen atom in the spacer represented by Y is taken together with a substituent on ring B and Y^1; and

other symbols have the same meanings as described in any one of claims 1 and 3.

5. (original): The compound according to claim 2, wherein ring A is a benzene, indane, indene or naphthalene ring.

6. (original): The compound according to claim 2, wherein ring B is a C5-12 monocyclic or bicyclic carbocyclic group which may have a substituent(s).

7. (original): The compound according to claim 6, wherein ring B is a benzene or naphthalene ring which may have a substituent(s).

8. (original): The compound according to claim 2, wherein ring B is a 5- to 12-membered monocyclic or bicyclic heterocyclic group which contains 1 to 3 hetero atoms selected from an oxygen atom, a nitrogen atom and a sulfur atom and may be partially or fully saturated.

9. (original): The compound according to claim 2, wherein ring B is a dihydronaphthalene, indene, 6,7-dihydro-5H-benzo[7]annulene, pyridine, indole, chromene, benzofuran, benzothiophene, benzoxazole, dihydrobenzoxepine, tetrahydroisoquinoline, isoindoline or tetrahydrobenzazepine ring which may have a substituent(s).

10. (original): The compound according to claim 4, wherein the nitrogen-containing heterocyclic group represented by ring B^1 is a pyrrole, tetrahydropyridine, dihydropyrrole or tetrahydroazepine ring.

11. (original): The compound according to claim 2, wherein X is a divalent group having 1 to 8 atoms in its main chain which is 1 to 4 combinations selected from the group consisting of C1-8 alkylene which may be substituted, C2-8 alkenylene which may be substituted, a nitrogen atom which may be substituted, -CO-, -O-, C3-6 cycloalkylene which may be substituted and phenylene which may be substituted.

12. (original): The compound according to claim 11, wherein X is $-CH_2-$, $-(CH_2)_2-$, $-(CH_2)_3-$, $-(CH_2)_4-$, $-(CH_2)_5-$, $-(CH_2)_6-$, $-(CH_2)_7-$, $-(CH_2)_8-$, $-CH_2-O-$, $-(CH_2)_2-O-$, $-(CH_2)_3-O-$, $-(CH_2)_4-O-$, $-(CH_2)_5-O-$, $-CH=CH-CH_2-O-$ or -cyclopropylene-CH_2-O-, which each may be substituted, in which the right side of each group is bound to ring B.

13. (original): The compound according to claim 2, wherein Y is a divalent group having 1 to 10 atoms in its main chain which is 1 to 4 combinations selected from the group consisting of C1-10 alkylene which may be substituted, C2-10 alkenylene which may be substituted, C2-10 alkynylene which may be substituted, a nitrogen atom which may be substituted, -CO-, -O-, -S-, phenylene which may be substituted, -(aziridine which may be substituted)-, -(azetidine which may be substituted)-, -(pyrrolidine which may be substituted)-, -(piperidine which may be substituted)-, -(piperazine which may be substituted)- and -(tetrahydropyridine which may be substituted)-.

14. (original): The compound according to claim 13, wherein Y is $-(CH_2)_3-NHCH_2-$, $-(CH_2)_3-NCH_3-CH_2-$, $-(CH_2)_3-NH-(CH_2)_2-$, $-(CH_2)_2-NH-(CH_2)_2-$, $-(CH_2)_2-CONHCH_2-$, $-(CH_2)_2-CONH-$(m-phenylene)-, $-CR^{Y1}=CH-CH_2-NH-(CH_2)_4-$, $-CR^{Y1}=CH-CH_2-NH-(CH_2)_5-$, $-CR^{Y1}=CH-CH_2-NH-(CH_2)_2-$, $-CH=CR^{Y1}-CH_2-NH-(CH_2)_2-$, $-CR^{Y1}=CH-CH_2-NH-CH_2-$, $-CH_2-$(azetidine)-, $-(CH_2)_2-$(azetidine)-, $-(CH_2)_3-$(azetidine)-, $-CR^{Y1}=CH-CH_2-$(azetidine)-, $-CH=CR^{Y1}-CH_2-$(azetidine)-, $-(CH_2)_3-$(piperidine)- or $-CR^{Y1}=CH-CH_2-$(piperidine)-, which each may be substituted, in which R^{Y1} represents a hydrogen atom, a halogen atom or C1-4 alkyl which may be substituted with 1 to 3 halogen atoms, and the right side of each group is bound to ring B.

15. (original): The compound according to claim 3, wherein Y^1 is a divalent group having 1 to 4 atoms in its main chain which is 1 to 4 combinations selected from the group consisting of C1-3 alkylene and -CO-.

16. (original): The compound according to claim 15, wherein Y^1 is $-CH_2-$, $-(CH_2)_2-$, $-(CH_2)_2-CO-$, $-CO-(CH_2)_2-$ or $-(CH_2)_3-$, which each may be substituted.

17. (original): The compound according to claim 3, wherein Y^2 is a divalent group having 1 to 5 atoms in its main chain which is 1 to 4 combinations selected from the group consisting of C1-3 alkylene which may be substituted and phenylene which may be substituted.

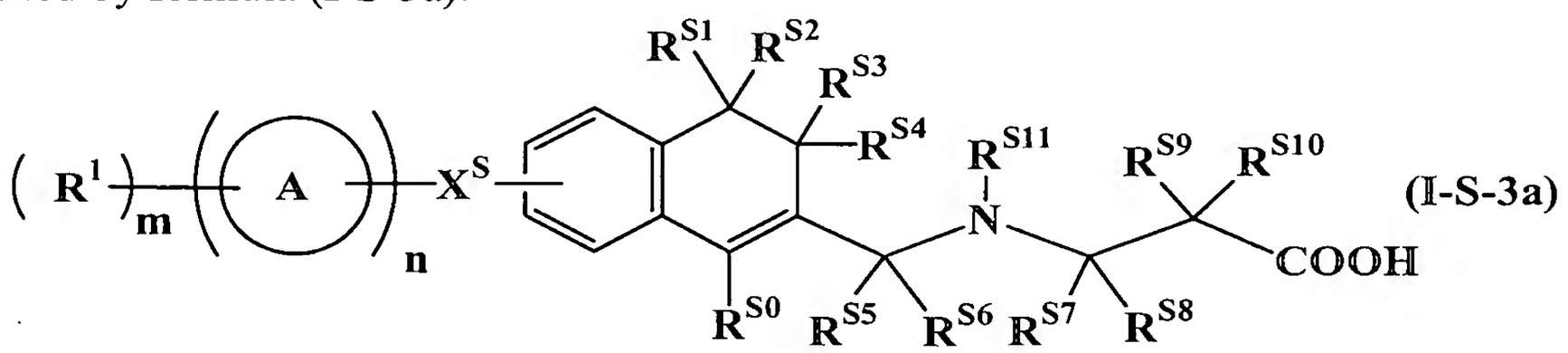
18. (original): The compound according to claim 17, wherein Y^2 is $-CH_2-$, $-(CH_2)_2-$ or -(m-phenylene)-, which each may be substituted.

19. (original): The compound according to claim 2, wherein the substituent represented by R^1 is a halogen atom, C1-20 alkyl which may be substituted, or C1-20 alkyloxy which may be substituted.

20. (original): The compound according to claim 19, wherein the substituent represented by R^1 is fluoro, chloro, bromo, methyl, trifluoromethyl or methoxy.

21. (original): The compound according to claim 3, wherein R^7 is a hydrogen atom or C1-20 alkyl which may be substituted.

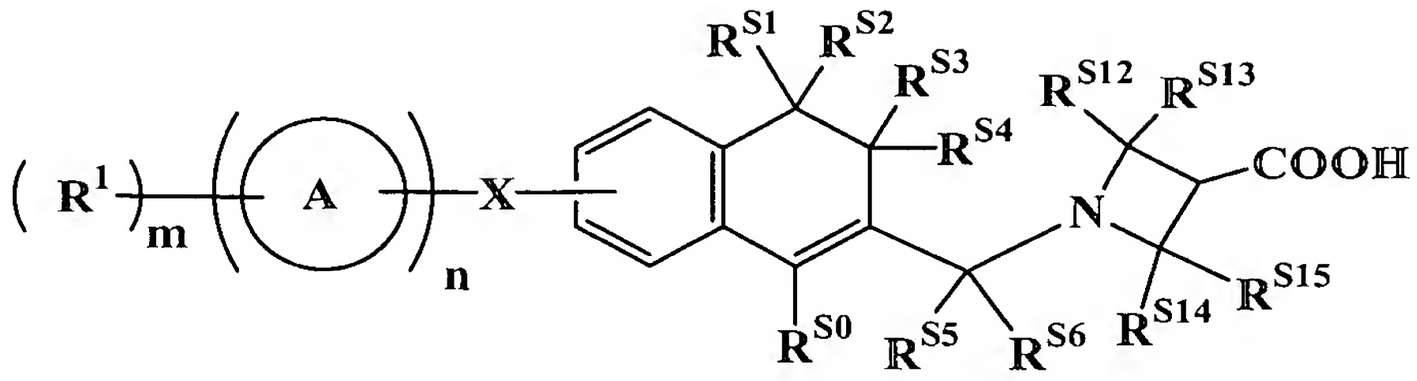
22. (original): The compound according to claim 2, which is a compound represented by formula (I-S-3a):



(I-S-3a)

wherein X^S has the same meaning as X described in claim 1, in which X^S is not -$(CH_2)_q$-E^a-; R^{S0}, R^{S1}, R^{S2}, R^{S3}, R^{S4}, R^{S5}, R^{S6}, R^{S7}, R^{S8}, R^{S9}, R^{S10} and R^{S11} each independently represents a hydrogen atom, a halogen atom, or C1-4 alkyl which may be substituted with 1 to 3 halogen atoms; E^a, q and other symbols have the same meanings as described in any one of claims 1 and 2, or

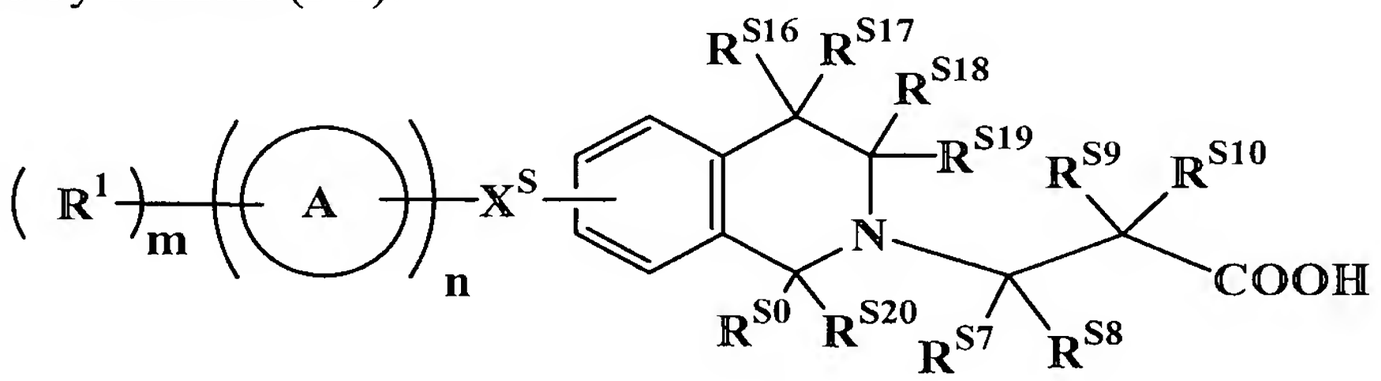
formula (I-S-7a):



(I-S-7a)

wherein R^{S0}, R^{S1}, R^{S2}, R^{S3}, R^{S4}, R^{S5} and R^{S6} each has the same meaning as described above; R^{S12}, R^{S13}, R^{S14} and R^{S15} each independently represents a hydrogen atom, a halogen atom, or C1-4 alkyl which may be substituted with 1 to 3 halogen atoms; E^a, q and other symbols have the same meanings as described in any one of claims 1 and 2.

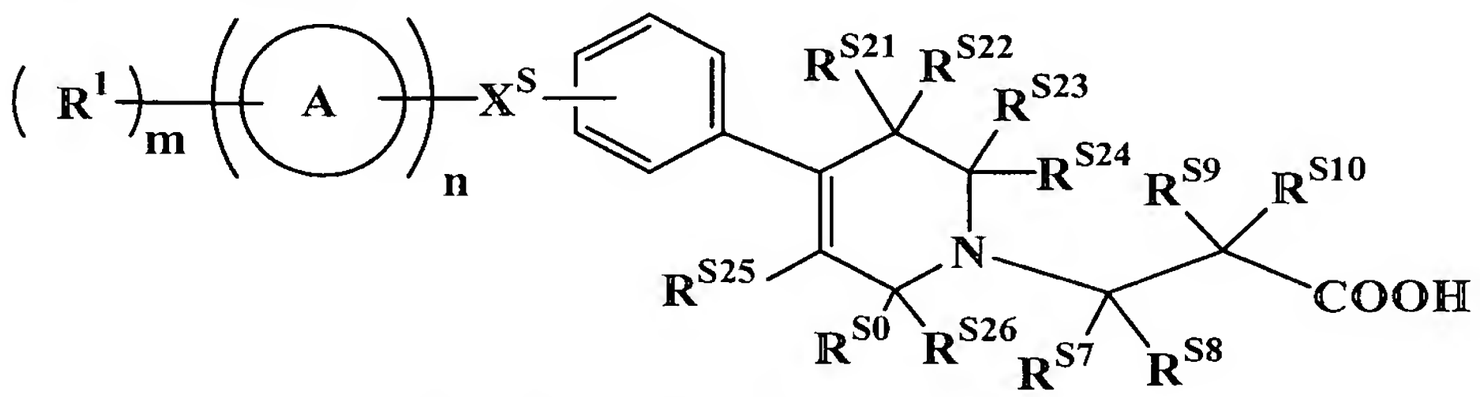
23. (original): The compound according to claim 2, which is a compound represented by formula (I-T):



(I-T)

wherein R^{S16}, R^{S17}, R^{S18}, R^{S19} and R^{S20} each independently represents a hydrogen atom, a halogen atom, or C1-4 alkyl which may be substituted with 1 to 3 halogen atoms; and other symbols have the same meanings as described in any one of claims 1, 2 and 22.

24. (original): The compound according to claim 2, which is a compound represented by formula (I-U):



(I-U)

wherein R^{S21}, R^{S22}, R^{S23}, R^{S24}, R^{S25} and R^{S26} each independently represents a hydrogen atom, a halogen atom, or C1-4 alkyl which may be substituted with 1 to 3 halogen atoms; and other symbols have the same meanings as described in any one of claims 1, 2 and 22.

25. (original): The compound according to claim 2, which is

(1) N-{(2E)-3-[4-(3-phenylpropoxy)phenyl]prop-2-enyl}-β-alanine,

(2) N-{[6-(3-phenylpropoxy)-2-naphthyl]methyl}-β-alanine,

(3) 1-{[6-(3-phenylpropoxy)-2-naphthyl]methyl}azetidine-3-carboxylic acid,

(4) 1-{[6-(3-phenylpropoxy)-2-naphthyl]methyl}piperidine-4-carboxylic acid,

(5) N-{(2E)-3-[2-methyl-4-(3-phenylpropoxy)phenyl]prop-2-enyl}-β-alanine,

(6) 1-{(2E)-3-[4-(3-phenylpropoxy)phenyl]-2-propenyl}piperidine-4-carboxylic acid,

(7) 1-{(2E)-3-[4-(3-phenylpropoxy)phenyl]-2-propenyl}azetidine-3-carboxylic acid,

(8) N-{3-[4-(3-phenylpropoxy)phenyl]propyl}-β-alanine,

(9) 3-({(2E)-3-[4-(3-phenylpropyl)phenyl]-2-butenyl}amino)propanoic acid,

(10) 3-({(2E)-3-[4-(3-cyclohexylpropoxy)-2-methylphenyl]-2-propenyl}amino)propanoic acid,

(11) 1-{[1-methyl-6-(4-phenylbutoxy)-3,4-dihydro-2-naphthalenyl]methyl}-3-azetidinecarboxylic acid,

(12) N-{[1-(5-phenylpentyl)-1H-indol-5-yl]methyl}-β-alanine,

(13) 3-[4-[4-(3-phenylpropoxy)phenyl]-3,6-dihydropyridin-1(2H)-yl]propanoic acid,

(14) 1-(6-[3-(4-chlorophenyl)propoxy]-1-methyl-3,4-dihydro-2-naphthalenylmethyl)-3-azetidinecarboxylic acid, or

(15) 1-(6-[3-(4-fluorophenyl)propoxy]-1-methyl-3,4-dihydro-2-naphthalenylmethyl)-3-azetidinecarboxylic acid.

26. (original): The compound according to claim 1, which is

(1) N-((2E)-3-{2-methyl-4-[(5-phenylpentyl)oxy]phenyl}prop-2-enyl)-β-alanine,

(2) N-((2E)-3-{4-[(5-phenylpentyl)oxy]phenyl}-2-propenyl)-β-alanine, or

(3) 3-({[1-methyl-6-(4-phenylbutoxy)-3,4-dihydro-2-naphthalenyl]methyl}amino)propanoic acid.

27. (original): A pharmaceutical composition which comprises a compound represented by formula (I) in claim 1, a salt thereof, a solvate thereof or a prodrug thereof.

28. (original): The pharmaceutical composition according to claim 27, which is an S1P receptor binding agent.

29. (original): The pharmaceutical composition according to claim 28, which is an EDG-6 binding agent which may have an ability to bind to EDG-1.

30. (original): The pharmaceutical composition according to claim 29, wherein the EDG-6 binding agent which may have an ability to bind to EDG-1 is an EDG-6 agonist which may have an agonistic activity against EDG-1.

31. (original): The pharmaceutical composition according to claim 27, which is an agent for preventing and/or treating a disease related to EDG-1 and/or EDG-6.

32. (original): The pharmaceutical composition according to claim 31, wherein the disease related to EDG-1 and/or EDG-6 is rejection in transplantation, autoimmune disease and/or allergic disease.

33. (original): The pharmaceutical composition according to claim 31, wherein the disease related to EDG-1 and/or EDG-6 is rejection in transplantation of kidney, liver, heart, lung, dermal graft, cornea, bone, bone marrow cells and/or pancreatic islet cells, collagen disease, systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, psoriasis, inflammatory bowel disease, Crohn's disease, autoimmune diabetes, lung fibrosis, atopic dermatitis and/or asthma.

34. (original): The pharmaceutical composition according to claim 27, which is an immunosuppressant agent.

35. (original): The pharmaceutical composition according to claim 27, which is an agent causing lymphopenia.

36. (original): The pharmaceutical composition according to any one of claims 28, 31, 34 and 35, which comprises

(1) 2-[3-(4-(5-phenylpentyloxy)phenyl)propanoylamino]acetic acid,

(2) 3-[3-(4-(5-phenylpentyloxy)phenyl)propylamino]propanoic acid,

(3) 3-[2-(4-(5-phenylpentyloxy)phenyl)ethylamino]propanoic acid,

(4) 2-[3-(4-(5-phenylpentyloxy)phenyl)propylamino]acetic acid,

(5) 2-[N-methyl-3-(4-(5-phenylpentyloxy)phenyl)propylamino]acetic acid,
(6) N-((2E)-3-{2-methyl-4-[(5-phenylpentyl)oxy]phenyl}prop-2-enyl)-β-alanine,
(7) N-((2E)-3-{4-[(5-phenylpentyl)oxy]phenyl}-2-propenyl)-β-alanine,
(8) 3-({[1-methyl-6-(4-phenylbutoxy)-3,4-dihydro-2-naphthalenyl]methyl}amino)propanoic acid,
(9) 3-carboxyl-5-[3-(4-(5-phenylpentyloxy)phenyl)propanoylamino]benzoic acid, or
(10) 2-chloro-5-[3-(2-fluoro-4-(5-phenylpentyloxy)phenyl)propanoylamino]benzoic acid,
a salt thereof, a solvate thereof or a prodrug thereof.

37. (original): A medicament comprising the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof or a prodrug thereof in combination with one or at least two selected from the group consisting of an antimetabolite, an alkylating agent, a T cell activation inhibitor, a calcineurin inhibitor, a proliferation signal inhibitor, a steroid, an immunosuppressant agent, an antibody used in immune suppression, an agent for treating rejection, an antibiotic, an antiviral agent and an antifungal agent.

38. (original): An immunosuppressant agent and/or an agent causing lymphopenia, which comprises a compound which has an ability to bind to EDG-6 and may have an ability to bind to EDG-1.

39. (original): The immunosuppressant agent and/or the agent causing lymphopenia according to claim 38, which is an agent for preventing and/or treating rejection in transplantation, autoimmune disease and/or allergic disease.

40. (original): A method for preventing and/or treating a disease related to EDG-1 and/or EDG-6 in a mammal, which comprises administering to a mammal an effective amount of the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof or a prodrug thereof.

41. (original): A method for immune suppression and/or lymphopenia in a mammal, which comprises administering to a mammal an effective amount of the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof or a prodrug thereof.

42. (canceled).

43. (canceled).